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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,757	01/16/2002	Eric A. Durant	899.056US1	5533
21186	7590	09/21/2007	EXAMINER	
SCHWEGMAN, LUNDBERG & WOESSNER, P.A.			FAULK, DEVONA E	
P.O. BOX 2938			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402			2615	
MAIL DATE		DELIVERY MODE		
09/21/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/051,757	DURANT, ERIC A.
	Examiner	Art Unit
	Devona E. Faulk	2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 18 June 2007.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-4,9-16 and 20-35 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 1-4,9-17 and 27-35 is/are allowed.

6) Claim(s) 20,21 and 23-26 is/are rejected.

7) Claim(s) 20-26 is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 16 January 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 6/18/2007.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

**DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/18/2007 has been entered.
2. The RCE was filed so that the IDS, filed on 6/18/2007, could be considered.
3. A notice of allowance was mailed on 3/16/2007. The indicated allowability of claims 20-26 is withdrawn in view of the newly discovered reference(s) to Takagi et al. and Watanabe et al. Rejections based on the newly cited reference(s) follow.
4. Claims 1-4,9-16,27-35 remain in allowable form.
5. Claims 5-8,17-19 and 36-43 are cancelled.

***Information Disclosure Statement***

6. The information disclosure statement (IDS) submitted on 6/18/2007 was filed after the mailing date of the allowance on 3/16/2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-21,23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weinfurter et al. (US 6,035,050) in view of Watanabe et al. (US 6,148,274).

Regarding claims 20 and 23, Weinfurter discloses a hearing aid comprising:

    a memory having a first population stored therein, the first population comprising a plurality of parent sets, each of the parent sets having at least one parameter (60, Figure 5; column 6, lines 35-39);

    a toggle device for toggling between a first pair of the plurality of parent sets (48, Figure 3; column 5, lines 1-7);

    a select indicator for selecting a preferred one set of the first pair (50, Figure 3; column 5, lines 5-8); and

    a processor (46, Figure 5).

Weinfurter fails to disclose that the processor ranks a hierarchy of the plurality of parent sets.

Watanabe discloses an optimization adjusting method that uses a genetic algorithm (column 4, lines 42-65; column 42, lines 8-48; ranking data is implicit to how a genetic algorithm functions). Watanabe discloses using genetic algorithm and using

mutation and crossover on at least one parent set (Watanabe, column 42, lines 8-48; Figures 67 and 69). It would have been obvious to modify Weinfurtner by using the optimal solution technique taught by Watanabe for the purpose of improving the hearing aid fit for a user.

All elements of claims 24 and 25 are comprehended by the rejection of claim 23.

Claim 26 is rejected using Weinfurtner as modified by Watanabe as applied above to claims 20 and 23 (Watanabe discloses converging data to a single solution set; column 3).

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Weinfurtner et al. (US 6,035,050) in view of Chang et al. (US 6,925,55).

Regarding claims 20 and 23, Weinfurtner discloses a hearing aid comprising:

a memory having a first population stored therein, the first population comprising a plurality of parent sets, each of the parent sets having at least one parameter (60, Figure 5; column 6, lines 35-39);

a toggle device for toggling between a first pair of the plurality of parent sets (48, Figure 3; column 5, lines 1-7);

a select indicator for selecting a preferred one set of the first pair (50, Figure 3; column 5, lines 5-8); and

a processor (46, Figure 5).

Weinfurtner fails to disclose that the processor assigns a probability of selection to the plurality of parent sets.

Chang discloses using a genetic algorithm and assigning a probability of selection to a data set (column 5, lines 29-54). Genetic algorithms are used to approximate solutions to optimization problems. It would have been obvious to modify Weinfurtner by applying the probability of selection techniques as taught by Chang for the purpose of better optimizing the hearing aid fit for a user.

#### ***Claim Objections***

10. Claims 20-23 are objected to because of the following informalities: Claims 20-23 and 26 recite " a hearing aid comprising.... a memory.. a toggle device... a selector indicator...". Figure 2 illustrates that the memory, processor, toggle device and selector are part of the apparatus (16) and not the hearing aid (14). Appropriate correction is required.

#### ***Allowable Subject Matter***

11. Claims 1-4,9-16,27-35 are allowed.

12. The following is an examiner's statement of reasons for allowance: See number 2 and 3 above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF



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